

CLAIMS:

1. For use in a conferencing system incorporating noise characteristic estimation of a signal of interest transmitted in a first direction, the improvement comprising detecting audio signal activity in a signal transmitted in a direction opposite to said signal of interest and in response ceasing said noise characteristic estimation.  
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2. The improvement of claim 1, further comprising detecting audio signal activity in said signal of interest and in response ceasing said noise characteristic estimation.  
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3. The improvement of claim 2, wherein said noise characteristic is noise level.
4. The improvement of claim 1, wherein said noise characteristic is noise level.  
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5. The improvement of claim 1, wherein said audio signal activity comprises at least voice activity and in-band tone activity.
6. The improvement of claim 2, wherein said audio signal activity comprises at least voice activity and in-band tone activity.  
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7. Apparatus for controlling noise characteristic estimation in a conferencing system, comprising:

1 a noise characteristic estimator for estimating a noise characteristic of a  
signal of interest transmitted in a first direction through said conferencing system;  
and

5 a first voice activity detector for detecting audio signal activity in a signal  
transmitted through said conferencing system in a direction opposite to said signal  
of interest and in response disabling said noise characteristic estimator.

8. The apparatus of claim 7, further comprising a second voice activity  
detector for detecting audio signal activity in said signal of interest and in response  
10 disabling said noise characteristic estimator.

9. The apparatus of claim 7, wherein said noise characteristic is noise level.

10. The apparatus of claim 8, wherein said noise characteristic is noise level.

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11. The apparatus of claim 7, wherein said audio signal activity comprises at  
least voice activity and in-band tone activity.

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12. The apparatus of claim 8, wherein said audio signal activity comprises at  
least voice activity and in-band tone activity.

13. A conferencing system, comprising:

a line input for receiving a line-in audio signal from an audio signal line;

a line output for transmitting a line-out audio signal to said audio line;

1 a speaker connected to said line input for broadcasting said line-in audio signal;

2 a microphone connected to said line output for applying said line-out audio signal to said line output;

5 an echo canceller connected to said line input and said line output for canceling echo signals of said line-in audio signal appearing in said line-out audio signal;

6 at least one noise level estimator for estimating noise level in one of either said line-in audio signal or said line-out audio signal; and

10 at least one voice activity detector for detecting voice activity in the other of said line-in audio signal or said line-out audio signal and in response disabling said at least one noise level estimator.

14. The conferencing system of claim 13, further comprising a further voice 15 activity detector for detecting voice activity in said one of said line-in audio signal or said line-out audio signal and in response disabling said at least one noise level estimator.

15. The conferencing system of claim 14, wherein said at least one voice 20 activity detector is connected to said line-output and said echo canceller, and said further voice activity detector is connected to said line input.

16. The conferencing system of claim 14, wherein said at least one voice 25 activity detector is connected to said line input, and said further voice activity detector is connected to said line output and said echo canceller.

17. The conferencing system of claim 13, wherein said at least one voice activity detector is connected to said microphone and said echo canceller.

18. A conferencing system, comprising:

5 a line input for receiving a line-in audio signal from an audio signal line;

a line output for transmitting a line-out audio signal to said audio line;

a speaker connected to said line input for broadcasting said line-in audio signal;

10 a microphone connected to said line output for applying said line-out audio signal to said line output;

an echo canceller connected to said line input and said line output for canceling echo signals of said line-in audio signal appearing in said line-out audio signal;

15 a first noise level estimator for estimating noise level in said line-in audio signal;

a second noise level estimator for estimating noise level in said line-out audio signal;

20 a first voice activity detector for detecting voice activity in said line-in audio signal and the output of said first noise level estimator and in response disabling said first and second noise level estimators; and

a second voice activity detector for detecting voice activity in said line-out audio signal and said second noise level estimator and in response disabling said first and second noise level estimators.